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ABSTRACT

This study synthesized research from 1990 to the present on effective teaching for English Language Learners (ELLs), focusing on instructional strategies and methods found to have the most educational benefit and value to the greatest number of ELLs. A total of nearly 100 potentially applicable articles were retrieved, and 34 were included in the final synthesis. Most articles described small-scale studies that focused on a limited number of classrooms, and most studies were qualitative. Results highlighted seven teaching practices that were found to be effective in improving the education of ELLs, though they were not widely used in teaching ELLs: collaborative learning communities, multiple representations, building on prior knowledge, instructional conversation, culturally responsive instruction, cognitively guided instruction, and technology-enriched instruction. Results indicated that although most teaching practices were based on theoretical and conceptual frameworks, too little attention may have been paid to the development of general instructional theory for ELLs. Implications for teacher education, for inservice teacher professional development, and for research are noted. (Contains 103 references.) (SM)

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Laboratory for Student Success

Research Synthesis on Effective Teaching Practices for English Language Learners

by

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University of Houston

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The Mid-Atlantic Regional Educational Laboratory at Temple University
Center for Research in Human Development and Education

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Research Synthesis on Effective Teaching Practices for English Language Learners

Hersh C. Waxman and Kip Tellez

One of our most pressing national educational priorities is improving the education of English language learners (ELLs). There are over 3.5 million ELLs (i.e., students whose first language is not English and who are either beginning to learn English or have demonstrated some proficiency in English) in U.S. schools, and these numbers have increased dramatically during the past few decades. Hispanic students constitute the largest group of ELLs, but they have the lowest levels of education and the highest dropout rate. Furthermore, Hispanic students' educational aspirations and academic performance in science, mathematics, and reading are significantly lower than those of White students. Approximately 40% of Hispanic students are one grade or more below expected achievement levels by the eighth grade, and only about 50% graduate on time.

In terms of educational achievement, the 1996 National Assessment of Educational Progress (NAEP) scores for 17-year-old Hispanic students were well below those of their White peers in mathematics, reading, and science. The dropout rates for Hispanic students were also much higher than for other ethnic groups. The high-school completion rate for Hispanics was 63%, less than the 81% for African American and 90% for White students. In 1998, 30% of all Hispanics 16 through 24 years old were dropouts (1.5 million), more than double the dropout rate for African Americans (14%) and more than three times the rate for Whites (8%). Thirty-two percent enroll in college; of that 32%, only 10% complete 4 years of college. These percentages are significantly lower than those of White and African American kindergarten children. Hispanic children under age 5 are less likely to be enrolled in early childhood education programs than African American or White children. In 1998, only 20% of Hispanic 3-year-olds were enrolled in early childhood programs, while 42% of Whites and 44% of African Americans were (for all the preceding statistics, see U.S. Department of Education, 1999, 2000).

In addition to experiencing the problems of underachievement and low educational attainment, many Hispanic ELLs live in households and communities with high and sustained poverty. About 35% of Hispanic children (18 years old or younger) are living in poverty. Hispanic students also attend schools with more than twice as many poor classmates as those attended by White students (46% vs. 19%). Furthermore, Hispanic students primarily reside in cities and are immersed in neighborhoods of concentrated poverty where the most serious educational problems exist (García, 1994). Schools with high concentrations of poor students, for example, tend to be poorly maintained, structurally unsound, fiscally underfunded, and staffed with large numbers of uncertified teachers (García, 2001). Furthermore, classrooms serving predominantly ELLs often lack the technology to adequately meet the needs of students.

These sociohistorical factors contribute to the complexity and seriousness of issues that Hispanics and ELLs generally face in their quest for educational success. Several different alternatives are often proposed to address these educational challenges. Often special language programs like bilingual education are implemented to address these educational concerns, but recently many of these programs have been eliminated because of political ideologies rather than research-based decisions.

The serious educational problems of ELLs highlight the need for research-based approaches to improve their academic achievement. There is a critical need to develop a solid knowledge base on effective teaching, leadership, and policy for ELLs that focuses on alterable practices that improve students' academic achievement. Furthermore, there is a great need to disseminate this knowledge directly to schools, school districts, and policymakers in a user-friendly way. The present report describes how we can improve the education of ELLs in traditional classrooms, using the results of a research synthesis of studies addressing the effectiveness of specific instructional strategies for ELLs. We argue that improving the quality of classroom instruction will enhance the educational outcomes of ELLs. First, we discuss several critical problems associated with the underachievement of ELLs: (a) the need for qualified

teachers, (b) inappropriate teacher expectations for ELLs, and (c) teaching practices that predominantly consist of a basic skills and mastery orientation leading to student compliance and passivity. Second, in response to the concerns regarding current instructional practices used with ELLs, we report the purpose, methods, and results of our research synthesis focused on effective instruction for ELLs. The final sections of the report focus on implications of these findings for teacher education, teachers' professional development, and research.

PROBLEMS ASSOCIATED WITH THE UNDERACHIEVEMENT OF ELLS

Several critical problems have been associated with the educational failure of ELLs. Although some educators argue that the most serious concerns are basic funding or political beliefs that influence decisions (Melendez, 1993), several educational problems are alterable, possibly pointing the way to educational improvements for ELLs. One of these critical problems is the shortage of adequately qualified teachers of ELLs and the lack of appropriate preparation for credentialed teachers of ELLs. Teachers of ELLs, for example, have to address the "double demands" of ELLs, which include acquiring a second language while learning traditional academic content (Gersten & Jiménez, 1998). However, estimates indicate that nearly half of the teachers assigned to teach ELLs have not received any preparation in methods to teach them (García, 1994). Presently, about 56% of all U.S. public-school teachers have at least one ELL student, but less than 20% of the teachers who serve ELLs are certified English-as-a-second-language (ESL) or bilingual teachers (Alexander, Heaviside, & Farris, 1999).

Many teachers of ELLs or other culturally diverse students do not feel that they are well prepared to meet the needs of their students. In a recent national survey of classroom teachers, 57% of all teachers responded that they either "very much needed" or "somewhat needed" more information on helping students with limited English proficiency meet high standards (Alexander, Heaviside, & Farris, 1999). Alternative forms of teacher preparation and teacher staff

development are being implemented by local school districts to meet the needs of ELLs, but they have generally not been effective in training qualified teachers of ELLs.

A second critical problem is teachers' inappropriate expectations of ELLs. Many teachers simply view ELLs as low-performing, native English-speaking children (Yates & Ortiz, 1991). Some teachers also believe that the academic failure of ELLs is primarily a function of language difficulties (Irvine & York, 1993) and that students must develop English oral proficiency before they can be taught to read and write (Díaz-Rico & Weed, 1995). In addition, several studies and reviews of research have found that schools serving ELLs and other minority students often devote less time and emphasis to higher order thinking skills than do schools serving White students (see Losey, 1995; Padrón & Waxman, 1993). ELLs and other minority students have often been denied the opportunity to learn higher level thinking skills because of the belief that they must demonstrate the ability to learn basic knowledge before they can be taught higher skills (Waxman, Padrón, & Knight, 1991). Furthermore, many teachers emphasize remediation for ELLs and other low-achieving students, which has resulted in teachers' lower expectations for these students and an overemphasis on repetition of content through drill and practice (Lehr & Harris, 1988). The result of these practices may lead to students adopting behaviors of "learned helplessness" and having a passive orientation to schooling (Coley & Hoffman, 1990).

A third critical problem related to the underachievement of ELLs has to do with the current teaching practices prevalent in classrooms serving ELLs. Most common in schools serving ELLs is the direct instructional model, where teachers typically teach to the whole class at the same time and control all of the classroom discussion and decision making (Haberman, 1991; Padrón & Waxman, 1993). This model emphasizes lecture, drill and practice, remediation, and student seatwork consisting mainly of worksheets (Stephen, Varble, & Taitt, 1993). Haberman argues that this overreliance on direct instruction in schools serving minority students constitutes a "pedagogy of poverty." He maintains that this instructional style leads to passive compliance and resentment among students and pressure on teachers to "make" students learn.

Several studies have examined classroom instruction for ELLs and found that this orientation to the pedagogy of poverty exists in many classrooms with ELLs (Padrón & Waxman, 1993; Waxman, Huang, & Padrón, 1995). In a large-scale study examining the classroom instruction of 90 teachers from 16 inner-city middle schools serving predominantly ELLs, Waxman, Huang, and Padrón found that students were typically involved in whole-class instruction and not interacting either with their teacher or other students. There were very few small-group activities, students rarely selected their own instructional activities, and they were generally very passive in the classroom, often just watching or listening to the teacher, even though they were found to be on task about 94% of the time.

In another study examining middle-school instruction in mathematics and science inner-city classrooms serving ELLs, Padrón and Waxman (1993) found that science teachers spent about 93% of the time in whole-class instruction, while mathematics teachers spent about 55%. Students in mathematics classes worked independently about 45% of the time, while there was no independent work observed in science classes. In the mathematics classes, no small-group work was observed, and students worked in small groups in science classes only about 7% of the time. Questions about complex issues were not raised by any of the mathematics and science teachers. Furthermore, teachers seldom (4%) posed open-ended questions for students in science classes, and they never posed these questions in mathematics classes.

These studies illustrate that classroom instruction in schools serving predominantly ELLs often tends to be whole-class instruction with students working passively in teacher-assigned activities. In these classrooms, teachers spend more time explaining things to students than questioning, cueing, or prompting students to respond extensively or to help each other. In summary, research has suggested that instructional inadequacies or pedagogically induced learning problems may account for many ELLs' poor academic achievement and low motivation (Fletcher & Cardona-Morales, 1990). These problems have created severe inequities in our schools.

Educators need to focus on research-based instructional practices that have been found effective for ELLs. Although many programs and school-based interventions have been found beneficial for some types of students at risk of failure, these programs and interventions may not necessarily be effective for ELLs. Educational practices need to specifically address the concerns of ELLs, who come from different cultures and are trying to learn a new language.

PURPOSE OF THE PRESENT STUDY

Many educators maintain that the best way to improve the education of ELLs is to provide them with better teachers and classroom instruction (see Padrón & Waxman, 1999). In order to determine which practices are most effective, educators need to focus on instructional practices found by research to be effective for ELLs. While the term *research* often has a negative connotation for educational practitioners and policymakers, it is the best criterion we have for determining effective practices in education. Thus it makes sense to focus on research showing benefits for ELLs from instructional practices that address their needs.

While a few other reviews and syntheses have targeted ELLs, some of these have included research conducted with monolingual native English-speaking children (e.g., August & Hakuta, 1998). Others reviews have merely prescribed generalized best practices for ELLs without taking into account the important individual and contextual variables that represent the great diversity of conditions or risk factors that students encounter. There is much variability within the population of ELLs. García (2001), for example, points out that 45% of the current ELL school-aged student population are foreign-born immigrants, while the remaining 55% are U.S.-born. Foreign- and native-born students as well as other subgroups of students have different dialects, levels of schooling, and degrees of access to preschool experiences, all of which differentially impact their achievement in school. This heterogeneity makes it highly problematic to describe a "typical" ELL. Therefore, recommendations from research should take into account this diversity among ELLs.

Although there have been several articles and reports examining effective teaching for ELLs (e.g., Padrón & Waxman, 1999), there have been very few systematic syntheses of the research in this area. The recently published fourth edition of the *Handbook of Research on Teaching* (Richardson, 2001), for example, includes 51 chapters and nearly 1,300 pages of text, but little attention is given to effective teaching practices for ELLs. In fact, only one citation in the subject index refers to ELLs, and only two citations refer to English as a second language. Similarly, there have been other recent books and reviews of effective teaching practices (e.g., Marzano, Pickering, & Pollock, 2001), but again very few that have specifically focused on teaching practices for ELLs.

The purpose of the present report is to synthesize the research on effective teaching for ELLs in order to identify the best teaching practices of the profession: the instructional strategies and methods that have been found to have the most educational benefit and value to the greatest number of ELLs. Determining best practices from educational research is a complex and highly debatable issue, but we chose the criteria for scientific research identified by the National Research Council's Committee on Scientific Principles for Educational Research (Shavelson & Towne, 2001). The committee concluded that "to be scientific, the design must allow direct empirical investigation of an important question, account for the context in which the study is carried out, align with a conceptual framework, reflect careful and thorough reasoning, and disclose results to encourage debate in the scientific community" (p. 4).

We have chosen to focus on research on effective teaching for ELLs published during the past decade (studies published from 1990 to the present), because this recent work reflects a paradigm shift to more qualitative research that typically addresses important issues such as context and language. Also, this past decade coincides with the rapid growth in numbers of ELLs in our schools and the large number of teachers who now have at least one ELL in their classrooms.

METHODS

Search and Selection Procedures

For this review, we used selection criteria and review methods similar to those used in other recent major national reviews conducted in areas like reading (National Reading Panel, 2000), and English language learners (August & Hakuta, 1997). We developed the following criteria for selecting research to be included in our review. Studies must have

- been published within the past 12 years (1990 to present),
- focused on K–12 classrooms and schools,
- focused on effective classroom instruction used with ELLs, and
- been published in English.

We initially identified studies by using relevant keywords, such as English language learners, English as a second language, ELLs, ESL, ELDs, instruction, and teaching, to search databases that included ERIC and *Dissertation Abstracts International*. We located additional studies by examining the reference lists of relevant literature reviews and reports. We consulted websites related to educational research, classroom instruction, limited English-proficient students, language minority students, and English language learners, such as those of the Office of Educational Research and Improvement and the National Center for Education Statistics.

We also specifically examined several major research journals in the field of classroom instruction and teaching, such as *Elementary School Journal* and *American Educational Research Journal*. We also examined several major research journals in the field of second language learning such as *TESOL Quarterly* and *Bilingual Research Journal*. Finally, entering the keywords into search engines (e.g., Google) provided a number of other sites that were searched.

Once we located articles that fit these initial criteria, we used two other criteria to evaluate them: the studies had to be (a) empirical and (b) rigorous. Articles and reports that were not supported with empirical data were omitted. Articles that were not rigorously designed and executed were also eliminated.

Description of Studies in Review

For each study meeting the above criteria, several characteristics are described and reported in Table 1. The table provides an alphabetical listing of all the studies in the synthesis and includes the following information for each study: (a) purpose, (b) participants (e.g., number of students and teachers), (c) research design (e.g., ethnography, case study, or survey), (d) methods (e.g., participant observation, interviews, or correlation), (e) context (e.g., subject areas, such as reading, mathematics, and science), (f) type of language program (e.g., mainstreamed class, transitional, or bilingual), and (g) results from each study.

A total of nearly 100 potentially applicable articles were retrieved. After further application of the criteria for synthesis, however, only 34 articles were included in the final synthesis. These included 19 journal articles, 8 dissertations, 3 conference papers, 3 chapters, and an ERIC report. Most of the articles described are small-scale studies focusing on a limited number of classrooms, typically between four and six. Most of the studies were qualitative, using interview or observation methods. Eight of the studies were experimental or quasi-experimental, most of them being quantitative. The other quantitative studies primarily used surveys, systematic classroom observation methods, and student achievement data.

RESULTS

All of the studies included in the synthesis were sorted into categories based on keywords; then a second sort was compiled after a further recategorization based on both the concepts studied and findings. For the third sort, the papers were randomized and again sorted on the basis of the concepts studied. This final sort yielded the same results as the initial sort, suggesting that the final categories were sound. The seven teaching practices that the sort yielded are reported in the following sections. Illustrative articles from the sort are discussed here (see Table 1 for information on all the articles in the final synthesis).

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Collaborative Learning Communities

The first effective teaching strategy uncovered by the research synthesis was related to, but extended well beyond, what is commonly known as cooperative learning. Many experimental (and most often quantitative) studies have demonstrated the positive effects of cooperative learning among ELLs (e.g., Calderon, Hertz-Lazarowitz, & Slavin, 1998). The research reviewed here, however, suggested a broader and more comprehensive role for cooperative learning. Each of the studies addressing the importance of social interactions for learning language considered group tasks as crucial experiences for language learning. They maintained, however, that interactional learning encouraged a strong form of social cooperation and discourse that *in turn drove language learning*. This is a crucial difference between experimental studies of cooperative learning among language learners and qualitative and ethnographic studies of the same; that is, the difference between the traditional perspective on cooperative learning and the ethnographers' perspective on group learning turns on the distinction between teaching strategies alone and a much broader view of teaching based on social relationships. Perhaps this difference results from the way that ethnographers approach their research, or perhaps it simply results from their predisposition to see all interactions as socially meaningful, whether or not such relations serve a learning function. But for the most part, they saw genuine social relationships and the talk that emerged from these relationships as the primary engine of language learning.

The term *cooperative learning* fails to capture fully the type of learning under study by many of the qualitative researchers we reviewed. Because their focus is trained on the social aspects of language use, the concept of collaborative learning communities, well developed by Kahne (1996) in the educational context, appears to be a more apt description. Collaborative learning community thought in education has its roots in John Dewey's vision of community as a society in which rational and democratic decision-making processes enable the pursuit of common goals. In learning communities of this type, open discourse is an essential feature of democracy. Further, learning community ideals call for community norms and values

continuously open to public critiques. In essence, a community-building belief in human societies suggests that open discourse leads to shared social values and free, unfettered social intercourse. Clearly, the goals and interests of a society based on collaborative learning communities are not necessarily the development of language, but such social interactions cannot proceed without a heavy reliance on language.

The qualitative and often ethnographic research studies reviewed here began with interest in language and literacy growth among English-language development (ELD) students, but in many cases the researchers discovered that the social growth resulting from interaction among students from diverse language and cultural backgrounds preceded and sometimes overshadowed language learning. For instance, Goatley, Brock, and Raphael (1995) found that inviting ELLs to join native English-speaking book clubs not only improved their language skills but also allowed them to share their cultural frame with other students. For one student, a Vietnamese immigrant, the effect was profound. Naturally, she made great language gains but also came to understand her role in the larger class as a spokesperson on many issues of which her native U.S. classmates had little knowledge. This ethnography also revealed important language and social development made by the native U.S. students.

The movement for conversation as a primary means of learning has its roots in Socrates' view of the function of language, which, stated plainly, was to communicate from individual mind to individual mind, resulting in ontological agreements. More recently, the work of Vygotsky (1934/1986) has been called upon to support the notion that language development is yoked to the development of thought, with language doing the pulling. And Vygotsky's now famous refutation of Piaget's theory of egocentric speech as sharply limited in function supports the view that our early private language "serves mental orientation, conscious understanding . . . in overcoming difficulties" (p. 228). Egocentric speech becomes inner speech, which in turn becomes dialogue with others, each transition resulting in more complex thinking. In this model, language, spoken language in particular, drives understanding. Contemporary educational

researchers have built on this body of theory and research by promoting academic discourse as the primary tool of learning in formal schooling.

Tujay, Jennings, and Dixon (1995) represent well this traditional research line of shared language use as a means for language growth. They based their yearlong ethnography of a classroom of diverse language learners on principles more aligned with language-learning goals than community-building ideals. Nevertheless, their conclusions sound remarkably like those of Goatley, Brock, and Raphael (1995). Observing a group of third-grade students who varied in their English language proficiency, they found that a focus on a common task allowed students varied ways to organize their learning. Hruska (2000) also used ethnography to show the relationship between social identity and language use for enhanced language achievement. This line of research also suggests that the interaction of the students served to create an important solidarity among them that encouraged language events. A focus on collaborative learning strategies seems to enhance language learning even when no student in the group has strong proficiency in English (Joyce, 1997).

These studies suggest that inviting students who are learning English to engage in academic conversations with their peers is the primary tool of language learning. It might seem that ELLs need proper language models such as teachers who can serve to develop the English skills. The studies reported here suggest that the teacher should serve as a language model, but that the teacher is merely one model of many, including peers who may be more or less proficient in English than the learner. It is perhaps important that the students understand the teacher's role in the classroom discourse more as a part of the community's discourse than as the arbiter of accuracy in the language.

A final observation suggests that collaborative learning communities have long been associated with Latino culture, but community-building practices may in fact be a key element in all immigrant households. For instance, several studies (e.g., Mikyong, 1995) have shown that Asian families demonstrated a distinct propensity for cooperative strategies. It may be that all

immigrant families are more likely to rely on family members (both nuclear and extended) during the stressful acculturation process. Therefore, teachers who use collaborative teaching practices are using a teaching strategy familiar to immigrant families. Schools must recognize the value placed on cooperative knowledge building among ELLs' families and exploit teaching strategies that resonate with this learning tool.

Providing Multiple Representations

A second effective instructional strategy found in the synthesis is providing multiple representations. The symbolic nature of oral written languages makes linking the meaning of words with some other representation of meaning mandatory for learning. An obvious example of this strategy is the teacher who shows the students a picture of a dog when saying the word *dog*. The teacher who truly understands the nature of the cognitive linkage between words and the acquisition of their meaning will bring a live dog to the classroom and talk about it, using the term *dog* frequently.

Linking realia (e.g., live dogs) and words (symbolic signs) is common in language teaching, but other methods of multiple representations have become more common. For instance, teachers who use graphic organizers are representing the relationships among words and concepts in the second language with visual stimuli (e.g., Tang, 1992). Astorga (1999) studied the role of pictures and second-language acquisition, finding that pictures illustrating written narrative facilitate the decoding process for children learning English. This research is part of a growing body of literature examining the relationships between images and text. The use of multiple media has not been lost on teachers, many of whom have discovered that video language support is highly effective in promoting language skills (Clovis, 1997). Rhythm, meter, and phonology are also language elements the thoughtful teacher must understand (see Medina, 1990). The study of multiple representations deserves more attention from the research literature.

In addition to computers, media sources that provide an important context for language learning could make instruction more effective.

Building on Prior Knowledge

Nearly every effective lesson-design model suggests that one of the first—and most complicated—tasks of the teacher in the instructional event is activation of prior knowledge. For one teacher, activating prior knowledge may mean reminding students of what was covered in yesterday's lesson. For another, it may mean investigating the most sacred cultural values held by the students and creating lessons incorporating them. For yet another, it may mean teaching what she knows because her cultural background mirrors the students'. Despite its complexity, the crucial role of activating prior knowledge in the formation of any educational experience has been recognized since the formal study of education began.

The importance of prior knowledge and its importance in working with ELLs is the focus of several papers in this synthesis. García (1991) found that prior knowledge played an important role when Latino ELLs were asked to demonstrate their knowledge on several tests of literacy. The qualitative evidence reported in this study indicated that students' limited background knowledge of the content (knowledge assumed to be held by all students) correlated with poor performance on questions that required use of background knowledge, lack of understanding of vocabulary, and literal interpretation of the test. Because it was found that students used Spanish to interpret vocabulary and understand English reading passages, it was suggested that Spanish literacy should not be overlooked when trying to improve English reading comprehension. In another study of Mexican American high-school ELLs, Godina (1998) found that teachers who used Mexicano culture were much more successful than those who ignored the cultural and linguistic knowledge.

Aninao (1993) tested the effectiveness of metacognitive strategies in secondary-school ELLs. While metacognitive strategies are not typically considered ways of building on prior

knowledge, Aninao's research had the best fit in this category. In a yearlong study designed to test the effectiveness of cognitive and metacognitive strategies, each student was instructed in the use of imagery (visualization techniques to help them remember vocabulary words), transfer (semantic connections with their native language), recombination (using known words in sentences), and reciprocal teaching (strategies preparing students to ask questions to assess comprehension, summarize, and clarify). The metacognitive strategies used were self-monitoring and self-evaluation. Aninao found that students were able to use recombination and imaging effectively, but strategies of cognitive transfer and reciprocal teaching were more difficult. Students were not successful in using the metacognitive strategies of self-evaluation and self-monitoring. It was suggested that metacognitive strategies should be taught before cognitive strategies in order to maximize student achievement.

Building on students' cultural and linguistic knowledge will require much more research. Qualitative studies, such as those reviewed here, appear to have begun a tradition that will bring us closer to understanding how effective instructional strategies make use of the knowledge students already have.

Instructional Conversation

Language can be learned only through its use. No rational linguist or language educator maintains that private study can result in second-language competence. Communication among teachers and learners seems crucial for all language learning. The research reviewed here supports this assertion but also suggests that effective second-language instruction must be built upon *lengthy* dialogues, referred to in this report as instructional conversations.

Teachers of English language development who utilize protracted language events understand the value of "keeping the conversation going," a feature of language acquisition that not only bonds teacher and student socially but also enhances the development of language comprehension (Bridges, Sinha, & Walkerdine, 1981). They engender conversations that offer

ELLs an opportunity to be understood, a chance for their speech acts to be valued, and an occasion to be corrected for form without humiliation. Giacchino-Baker (1992) discovered that secondary-school ELL students reported that they needed more time and more interactions with their teacher to learn English. A similar concern was reported in another study of secondary-school ELLs (Poglinco, 1997). These students understood that when teachers were able to engage in instructional conversations or protracted language events with them, they acquired more language. Villar (1999) found that the methods of instructional conversation, when combined with the time to engage in expansive lessons, served to improve English language acquisition.

Pilgreen and Krashen (1993) found that protracted language events with text alone encouraged increased English skills. After implementing a sustained silent reading program with secondary-level ELLs, they found that students enjoyed books more, read more, and understood more of what they read. Even extended discussion of mathematics appeared to advance English skills (Kaplan & Patino, 1996). Finally, Clark (1999) found that teachers who committed to language interactions created a schoolwide environment for language learning.

As previously pointed out, classroom instruction for ELLs typically is teacher-centered, dominated by teacher talk and student passivity. Teachers generally are unresponsive to students' utterances and create very few meaningful interactions that promote language and literacy development (Gallimore & Goldenberg, 1992). While direct instruction practices may be suited to some knowledge and skill domains that are hierarchically organized in a linear sequence, these practices are not as effective for less structured domains (Gallimore & Goldenberg). Basic or critical thinking skills can be effectively developed through instructional conversations or dialogue, which is the process of questioning and sharing ideas and knowledge. The practice of instructional conversation addresses the need for a cognitively challenging curriculum and moves teachers and students away from the typical recitation patterns that currently exist in schools.

Instructional conversation moves beyond direct instruction by providing students with opportunities for extended dialogue in areas that have educational value as well as relevance for

students (August & Hakuta, 1998). Teachers and students relate the formal school content to the student's individual, community, and family knowledge, and teachers are able to contextualize instruction to fit the knowledge, skills, values, and culture of the learner. This instructional approach is similar to culturally responsive instruction (discussed below) in that it focuses on the students' cultural knowledge, but it goes beyond that teaching practice because it also explicitly focuses on the processes of forming, expressing, and sharing ideas and knowledge in order to build a community of learners.

The comprehensive review of research by August and Hakuta (1998) found that effective teachers of ELLs provide students with opportunities for extended dialogue. Much of the theoretical and research base for instructional conversation has been summarized by Tharp and Gallimore (1988) on the basis of their work on the Kamehameha Early Education Project (KEEP). Tharp, Gallimore, and their colleagues developed and researched a successful reading program for native Hawaiian students that included instructional conversation as one of its major components. García's (1990) study of effective teachers of ELLs also lends support to the benefits of instructional conversation. He found that effective teachers of ELLs generally elicited student responses at a low cognitive and linguistic level but then let students take control of the lesson, which resulted in more advanced cognitive and linguistic discussion.

Instructional conversation also helps ELLs create meaning in the social context of the classroom. Joint activity and discourse between teachers and students create a common context of experience within the classroom. Furthermore, since instructional conversations reveal the knowledge, skills, and values of the learner, they allow the teacher to contextualize teaching to fit the needs of each student. This is especially critical for teachers of ELLs, because many of their students come from very diverse backgrounds.

Culturally Responsive Instruction

One major education problem of schools serving diverse student populations is that the curriculum and teaching practices have not reflected the diversity within the population (Padrón & Waxman, 1999). The culture in which many ELLs live often prevents them from acquiring the middle-class cultural patterns on which most school curriculum and instructional materials are based. This phenomenon is often viewed as a mismatch between the culture of the home and the school culture, or a discrepancy between schools' goals and the needs and concerns of students (Gordon & Yowell, 1994). Many classroom teachers need assistance in acquiring the knowledge and skills necessary to bridge the gap between the culture of the school and the home culture of students.

Culturally responsive instruction addresses these previously mentioned concerns. It emphasizes the serious miscommunication problems that can occur in classrooms when teachers do not understand their students' social and cultural milieu. Culturally responsive instruction focuses on the students' needs and culture and tries to create conditions that support the empowerment of students (Darder, 1993). It emphasizes the everyday concerns of students and tries to incorporate them into the curriculum and textbooks. It also focuses on the critical family and community issues that students encounter daily, helping students prepare themselves for meaningful social roles by emphasizing social responsibility and academic responsibility. Furthermore, it addresses the promotion of racial, ethnic, and linguistic equality as well as the appreciation of diversity (Boyer, 1993).

Culturally responsive instruction requires a learner-centered instructional approach. Learner-centered teachers use students' prior knowledge or existing cultural knowledge as a foundation or scaffold to guide instructional tasks. Some benefits of culturally responsive instruction for ELLs are that it (a) improves the acquisition and retention of new knowledge by working from students' existing knowledge base, (b) improves self-confidence and self-esteem by emphasizing existing knowledge, (c) increases the transfer of school-taught knowledge to real

life, and (d) exposes students to knowledge about other individuals or cultural groups (Rivera & Zehler, 1991).

A large body of research has found a significant relation between culturally responsive instruction and students' academic success (see Tharp & Gallimore, 1988). There have only been a few studies, however, that have specifically examined culturally responsive instruction for ELLs. One such study (Darder, 1993) found that Latino teachers who engaged in responsive instruction were more likely to recognize and address the academic and social needs of their students. Furthermore, students had more responsibility for their own learning and were more involved in the development of curriculum activities and classroom decisions. Darder further found that the key difference between Latino and White effective teachers was that Latino teachers were more likely to reinforce and perpetuate students' cultural values. McCollum's study (1989) comparing whole-class lessons taught in third grade by a Spanish-speaking Puerto Rican teacher and an English-speaking White teacher found similar results.

This research provides evidence that instructional practices that address the cultural and linguistic needs of students are effective methods for preparing students to compete in mainstream society (Osborne, 1996). Unfortunately, there is also evidence that the culture-related instruction is often not implemented in classrooms (Padrón & Knight, 1989).

Cognitively Guided Instruction

Influenced by theory and research from the field of cognitive psychology, many educators have adopted an information-processing view of teaching and learning (Shuell, 1993; Waxman, Padrón, & Knight, 1991). From this perspective, learning is viewed as an active process, and teaching is a means of facilitating students' active mental processing. This cognitive approach also suggests that students need to apply cognitive strategies in order to learn (Winne, 1985). Therefore, cognitively guided instruction emphasizes the development of students' cognitive learning strategies and the direct teaching and modeling of cognitive learning strategies, as well as techniques that foster students' metacognition and cognitive monitoring of their own

learning. Furthermore, teachers are encouraged to focus on affective, motivational, metacognitive, developmental, and social factors that influence students, since they all occur simultaneously and are all critical to students' learning (Presidential Task Force on Psychology in Education, 1993).

From the cognitive perspective, effective instruction (a) activates or assesses students' prior knowledge of content, (b) models or illustrates appropriate learning strategies, and (c) connects both prior knowledge and learning strategies to the new learning objectives (Jones & Friedman, 1988). Another goal of effective instruction is to shift the responsibility of learning from the teacher to the student. This perspective also assumes that individuals have prior knowledge differences and differ in the frequency and types of strategies they bring to the learning context. Effective teachers are aware of student differences and try specifically to help students who use weak or ineffective strategies. For ELLs and other students at risk of failure, strategy instruction may also need to include techniques that address students' affective needs (Coley & Hoffman, 1990). If students, for example, have developed a passive orientation to learning, then the strategy instruction would need to include an affective dimension so that students can perceive themselves as able learners.

This instructional approach can be very beneficial for the large number of ELLs who are not doing well in school, because once students learn how to use cognitive strategies effectively, some of the individual barriers to academic success faced by this group may be removed. Explicit instruction in strategies and modeling comprise only the initial steps of successful strategy instruction models. The scaffolding approach, which gradually relinquishes control of classroom dialogue and control of strategy use to students, is another important component of successful strategy programs such as reciprocal teaching (see Brown, Palincsar, & Purcell, 1986), which takes place in a cooperative instructional environment where the teacher and students engage in a dialogue.

There is a growing understanding that effective teaching practices for ELLs should include cognitive strategy instruction (see Gersten & Jiménez, 1998). The August and Hakuta (1998) comprehensive research review also found that effective teachers of ELLs teach metacognitive strategies to students. There have been several studies conducted with ELLs that have focused on their cognitive reading strategies. Padrón, Knight, and Waxman (1986), for example, compared strategies used by bilingual and English-monolingual students using a think-aloud protocol. Students read a passage and stopped at predetermined intervals to explain the strategies that they were using in order to comprehend the passage. The results indicated that bilingual and monolingual third- and fifth-grade students were not using the same number of the cognitive reading strategies. English-monolingual students, on the average, used about twice as many strategies as bilingual students.

Cognitive strategy training programs may be an effective means of improving cognitive outcomes of ELLs (Chamot & O'Malley, 1987; Padrón & Knight, 1989). Padrón (1992), for example, found that explicit training of reading strategies significantly improved the reading achievement of ELLs. Padrón randomly assigned 87 third-, fourth-, and fifth-grade Hispanic bilingual students to four instructional groups. Group 1 was taught with the reciprocal teaching method. Group 2 was instructed with the question–answer relationships method (see Raphael & Pearson, 1985). Two control groups were used to determine whether it was the strategy training or the additional instruction that increased students' reading achievement. Group 3, therefore, read passages and answered questions, while students in Group 4 remained in their regular classroom and received instruction from their teacher on a subject other than reading. Students who participated in either the reciprocal teaching or the question–answer relationship group scored significantly higher on a standardized reading achievement test than students who participated in the control groups.

Technology-Enriched Instruction

A final instructional practice that has been found to improve the teaching and learning of ELLs is the use of technology in the classroom. Several studies and reviews of research specifically focusing on ELLs have found that technology is effective for ELLs (see Chavez, 1990; Merino, Legarreta, Coughran, & Hoskins, 1990; Walker de Felix, Johnson, & Shick, 1990). Chavez, for example, examined first- and second-grade students who were instructed to use the Write to Read (WTR) Program to develop English writing and reading skills. The program provided a risk-free environment for ELLs that made the students feel comfortable about expressing their ideas. Students' story writing also showed improvement in sentence structure and breadth of content. Merino, Legarreta, Coughran, and Hoskins found that pairing a limited English-proficient (LEP) student with a fluent English-proficient (EP) student was effective in producing on-task behavior, equitable turn taking, and cooperative exchanges during computer-based science activities. Dixon (1995) also demonstrated the benefits of LEP students working collaboratively with EP students at a computer during mathematics. She found that both LEP and EP students who worked in a computer-based, dynamic instructional environment significantly outperformed students who worked in traditional instructional environments on measures of reflection and rotation concepts and of two-dimensional visualization ability.

Research evidence also indicates that multimedia use with ELLs can produce positive effects. Walker de Felix, Johnson, and Schick (1990), for example, developed two interactive videodisc lessons that were tested with fourth-grade, inner-city ESL students. Their findings provide evidence of the advantages of contextually rich learning environments for ELLs. Furthermore, some types of technology like multimedia are effective for ELLs and students at risk because they help students connect images, sound, and symbols (Kozma & Croninger, 1992). Multimedia technology can be especially helpful for ELLs, because it can facilitate auditory skill development by integrating visual presentations with sound and animation (Bermúdez & Palumbo, 1994). Another area that holds promise for improving the teaching and learning of

ELLs is the use of computer networks and telecommunications. ELLs can communicate with authentic audiences through the Internet and other technologies (García, 2000).

Several conceptual articles and research studies have examined the specific ways technology impacts students at risk and ELLs (see Cantrell, 1993; García, 2000). Instructional technology has been found beneficial for these students in the following ways: (a) it is motivational; (b) it is nonjudgmental; (c) it can individualize learning and tailor the instructional sequence to meet students' needs and rate of learning; (d) it can give prompt feedback; (e) it provides the students with a sense of personal responsibility, control, and autonomy; (f) it can be less intimidating to students that traditional instruction; (g) it gives the students a rich linguistic environment; and (h) it diminishes the authoritarian role of the teacher. Technology also allows ELLs to work in collaborative inquiry projects, access online resources in several languages, and click onto video, audio, and literacy aids in two languages. Computers also provide ELLs the opportunity for hands-on learning and working collaboratively in pairs or small groups of varying English proficiency. Such work can improve ELLs' cognitive and psychosocial development (Dixon, 1995; Merino, Legarreta, Coughran, & Hoskins, 1990).

Another important outcome of technology-enriched classrooms is that they can help reduce or eliminate the teacher-dominated, direct-instructional approach that exists in most classrooms with ELLs. In a study that included many ELLs, Waxman and Huang (1996) found that instruction in classroom settings where technology was not often used tended to be whole-class approaches, where students generally listened or watched the teacher. Instruction in classroom settings where technology was moderately used had much less whole-class instruction and much more independent work. Research supports the notion that technology use in classrooms with ELLs may change teaching from the traditional, teacher-centered model to a more student-centered approach. Technology changes the nature of classroom interactions because it alters the ways that information can be obtained, manipulated, and displayed.

DISCUSSION AND IMPLICATIONS

The seven instructional practices described in this report have all been found effective for teaching ELLs, and there are several benefits of incorporating these approaches in schools serving ELLs. In classrooms with many ELLs, instruction becomes extremely complex. Not only do the teachers have to deal with students' language and knowledge-base differences, but they also must interpret content presented in textbooks from a cultural perspective different from that of the student. Instructional conversation and culturally responsive instruction are two practices that can provide cultural context for instruction.

Cognitively guided instruction also has several positive components that can improve the education of ELLs. In reciprocal teaching, for example, the text may either be read by the students, or the teacher may read the text aloud to students. This technique can be very useful when teaching ELLs, who may experience a great deal of difficulty with the language. The teachers' reading the text provides students with the opportunity to learn comprehension strategies without having to wait until they learn to decode.

Technology-enriched instruction also has the potential for deepening classroom instruction for ELLs, making it more meaningful, and assisting the learning of higher order thinking skills. When technology is used this way as an instructional tool, it can eliminate total reliance on direct-instructional approaches and empower all students with the thinking skills that will help them help themselves. Technology-enriched environments, however, include new and very different instruction approaches than those to which teachers have been exposed to in their teacher-education programs. Technology-enriched instruction requires a student-oriented approach and technological skills, which schools and districts should provide.

The teaching practices reported in this report are not separate, complete instructional programs but are different practices or strategies that can be implemented simultaneously in the classroom. All the instructional approaches are deeply integrative and interwoven. For example, the principles and conditions of culturally responsive instruction (e.g., respect for diversity) can

be taught and applied through cooperative learning. From a cognitively guided teaching perspective, some methods like reciprocal teaching are explicitly designed for students to construct knowledge through the social process of cooperative learning. Other aspects of collaborative learning, such as discussion, debate, negotiation, and compromise, reflect aspects of instructional conversation. Similarly, students' language development can be enhanced by having them work in small groups while using technology (see Chisholm, 1994). The search for one best approach to classroom instruction for ELLs may be futile, but this synthesis indicates that there are several effective teaching practices for these students.

Implications for Teacher Education

One of the major challenges for teacher educators is to disseminate the research that has been conducted in ELL instruction to preservice and classroom teachers (Boyle-Baise & Grant, 1992). Teacher-education programs at both the inservice and preservice levels should ensure that teachers are provided with appropriate knowledge of and training in effective instructional practices for teaching ELLs. Prospective teachers, in particular, need to have field experiences and student teaching opportunities in culturally diverse settings. Teacher-education programs should also develop teachers who can recognize and change the pedagogy of poverty. School administrators should similarly recognize the dangers of existing instructional practices and encourage teachers to change. The implementation of these instructional approaches must be carefully orchestrated. It will require a strong commitment from teachers, because the approaches are quite different from those to which they have been typically exposed in their teacher-preparation programs.

In preparing teachers for these new instruction approaches, teacher-education programs should (a) provide the knowledge base about the cognitive and affective processes that influence learning, (b) include information about general and domain-specific metacognitive strategies and how they can be effectively taught to students of differing abilities and backgrounds, (c)

encourage preservice teachers to think aloud during explanations so that they can model metacognitive thinking for their students, and (d) focus on learner-centered instructional approaches (Presidential Task Force on Psychology in Education, 1993). This will call for a change in policy to empower teachers with the authority and support to implement such changes. In order to carry out such changes, teachers need to be given more opportunity to restructure their classroom environments and to collaborate in the training process (Gallimore & Goldenberg, 1992).

Several other factors related to teacher preparation must also be addressed in implementing these instructional approaches. Teachers may need to receive more information on how to address the cultural and linguistic differences represented in their classrooms. They may also need more exposure to strategy training, instructional technology, and instructional conversation. Furthermore, because many teachers do not believe that these practices are beneficial for ELLs, teacher training may need to specifically address issues related to teachers' attitudes and perceptions of these students.

Teachers of ELLs must deal with students of different cultural backgrounds and in many instances of different levels of language proficiency. The variety of languages found in many classrooms today and the difficulty in assessing the students' levels of proficiency make diagnosis difficult. Therefore, teacher-education programs must help teachers readily diagnose students' background knowledge and address student differences in the classroom. Teacher-education faculty may also need to change their repertoire of teaching patterns to prepare teachers to use these instructional approaches, and faculty should model these practices and provide opportunities for preservice and inservice teachers to engage in them.

Teacher-training institutions also should be involved in changing teachers' role from that of delivering knowledge to one of facilitating learning in a technology-rich environment. Researchers like Chisholm (1993) have suggested that teacher-preparation programs need to accomplish multiple tasks if technology is to be incorporated successfully into K–12 classrooms.

including (a) addressing classroom management issues, (b) exposing prospective teachers to classrooms where a variety of technologies are being used, (c) demonstrating various types of software and instructional methods that can be utilized with a diverse student population, (d) modeling teaching and learning strategies with computer-related technologies, and (e) training teachers in the evaluation of software. For teachers of ELLs, the evaluation of software must include being able to determine whether the software is culturally appropriate and whether it can be utilized by students with various learning styles. Policymakers should target such teacher-training efforts specifically to high-poverty schools serving ELLs, because there is evidence that those teachers receive less professional development in areas like instructional technology than do teachers from more economically advantaged schools (Wenglinsky, 1998).

Implications for Teachers' Professional Development

The professional development of teachers needs to be seriously addressed in order to improve the education of ELLs. Whereas most teacher professional development lasts one school day or less, many teachers desire long-term professional development in order to (a) use new methods of classroom instruction like cooperative grouping, (b) integrate educational technology in the subject they teach, and (c) address the needs of ELLs and other students from diverse cultural backgrounds. Classroom teachers want more time for training and planning, as well as more opportunities to collaborate and learn from other teachers.

Research shows that professional-development approaches are more successful when they try to enhance and expand a teacher's current repertoire of instruction strategies rather than radically altering them (see Smylie, 1988). Reforms that simply add work to an already crowded teaching schedule and that are not perceived by teachers as helping them to meet their teaching goals will be rejected by teachers. This underscores the importance of considering teachers' knowledge and the way teachers organize their teaching day when considering a change in education. Creamer and Creamer (1988) suggest that major innovations require that the

individuals involved perceive the change as both necessary and useful, that the changes be compatible with other programs and goals, and that the innovations have strong leadership.

Rather than radical alterations in teachers' classroom instruction, these teaching practices for ELLs should be presented as opportunities for teachers to expand their current repertoire of instructional strategies. Teachers must receive extensive modeling and time to practice before expecting to see significant change. Additionally, time for collaborative feedback among the teachers and adequate resources and materials are critical to successful change. Teachers should be provided with opportunities to interact and have conversations about standards, theory, and practical classroom implementation. Furthermore, these processes must be implemented in an atmosphere of instructional leadership and trust, where teachers' professionalism is both valued and rewarded.

Implications for Research

Although research on effective teaching for students for ELLs has made significant progress over the past decade, there are still additional areas that need further investigation. To capture all the processes and nuances that occur in classrooms attended by students at risk of failure, triangulation procedures are needed to collect data from multiple perspectives. Collecting multiple measures or indicators of classroom processes may provide us with a more comprehensive picture of the quality of classroom instruction provided to ELLs and a better sense of which practices are most effective for them and why. Further classroom research focusing on instruction for ELLs should also examine the social context surrounding instruction, because it provides important information on how instructional aspects such as classroom interaction differ with settings, topics, situations, activities, and purposes (Losey, 1995).

Our nation faces very serious challenges in serving ELLs. Progress has been made in isolated areas, but to sustain this progress and to extend it to much larger numbers of schools, a more solid research base must be provided for the many suspected connections between

instructional processes and student outcomes and for the effectiveness of various promising programs in diverse contexts (Rossi & Stringfield, 1995). More studies are needed to examine how some ELLs overcome diversity and are succeeding in our schools. These resilient learners often face enormous adversity in their lives but nevertheless succeed. Although threatened by a variety of risks, they overcome apparently insurmountable odds to build promising futures. Through the study of resilience, educators can identify factors that provide protection and support for some ELLs and then provide them for similar students from disadvantaged backgrounds who have not done well in school (Waxman, Huang, & Padrón, 1997).

Additionally, further correlational, longitudinal, and especially experimental research is needed to examine the effects on students' cognitive, affective, and behavioral outcomes of the instructional practices detailed in this synthesis. In particular, we need to examine the extent to which these practices enhance students' higher-level thinking, motivation, and educational aspirations. Since these approaches have not been incorporated into an integrated program for improving teaching and student learning, evaluative research studies will need to examine the impact of such interventions. Other research questions that still need to be investigated in this area include examining (a) the optimal levels at which these practices should be used, (b) how teachers' attitudes influence their classroom instruction, and (c) what other district- or school-level factors influence the teaching practices used with ELLs.

SUMMARY

Although most of the teaching practices summarized in this report are based on theoretical and conceptual frameworks, there are still concerns related to whether too little attention has been paid to the development of general instructional theory for ELLs. There have been only a few conceptual models of instructional effectiveness (Creemers, 1994), and these models have not explicitly focused on instructional practices for ELLs. Classroom settings for ELLs are quite complex, however, and a general instructional theory for ELLs may not

sufficiently help teachers understand how to improve their teaching practices. Reformers generally have focused on solving educational problems without taking into account the growing diversity of students in the nation's schools. Instructional improvements should focus on the needs of students.

The most important issue related to effective classroom instruction is not the form it takes (e.g., simple characteristics of instruction such as large- or small-group teaching), but the quality of the instruction (Good, 1988). The teaching practices described in this report all need to be performed well. Furthermore, there is an affective component associated with all of these practices that needs to be considered. Given the problems associated with low expectations of ELLs, teachers' high expectations for these students must be ensured. Teachers must provide ELLs with academic tasks that are complex and challenging (Rivera & Zehler, 1991). They also need to create warm, positive classroom environments and be supportive of all students' needs and of alternative cultural perspectives.

In addition to these issues, there are other pertinent areas and specific content that teachers of ELLs need to be aware of. Of utmost concern is that teachers of ELLs must be knowledgeable about language development and language acquisition. Another area that teachers need to address is methods for motivating ELLs. Meyer (2000), for example, argues that the "yearning goad"—the passion and pursuit of interesting topics—is an approach for motivating ELLs. Yet few activities in the school curriculum are based on student-generated topics. Furthermore, few teachers exhibit in their instruction the "personal passions" that generate student interest.

Other aspects of schools and classrooms are similarly important in order to improve the education of ELLs. Systemative student assessment, staff development, opportunities for student-directed activities, home and parent involvement, explicit skills instruction, balanced curriculum, supportive schoolwide climate, school leadership, customized learning environments, articulation and coordination within and between schools, and use of native language and culture are other

factors that have been found to be attributes of effective schools and classrooms for ELLs (August & Hakuta, 1998).

This report has not focused on other models of effective teaching like Cummins's (2000) transformative pedagogy, where effective instruction is viewed as a collaborative process of critical inquiry enabling students to relate the curriculum to their own lives and analyze broader social issues. While transformative pedagogy includes some teaching practices described here like culturally relevant instruction and instructional conversation, these are not its primary focus. While there is some empirical evidence that supports transformative pedagogy for ELLs (e.g., Delgado-Gaitan & Trueba, 1991), presently there is not a substantive body of research that validates its effectiveness, perhaps because it is rarely emphasized in inservice and preservice teacher-education programs and is thus rarely used.

In conclusion, the seven research-based, instructional practices described in this report have all been found to improve the education of ELLs, though they have not been widely used in teaching ELLs. Although the focus in this report is on instruction for ELLs, these practices should not be limited to them. The research base suggests that they are effective for most students. It may be that teachers need to follow the knowledge base from the paradigm of research that they believe most adequately describes their philosophy of education or situational knowledge. Once teachers begin to examine their existing teaching practices critically, they may acknowledge the value of more student-centered practices such as those described in this report. When that occurs, teachers may begin to tailor and adapt these practices to their own classroom needs.

Table 1

Summary of Purposes, Participants, Research Designs, Methods, Contexts, Program Types, and Results of the Studies

Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Aninao, J. C. (1993). Training high-school ESL students to use language-learning strategies (Doctoral dissertation, Stanford University, 1993). *Dissertation Abstracts International, 54*(6), 2074.	To instruct ESL students in use of cognitive and metacognitive learning strategies and assess the frequency students' use of the learned strategies.	Seven beginning high-school English language learners in suburban San Francisco Bay Area school.	Interview, multiple data sources.	Case study.	Reading/ Language.	English as a Second Language (ESL).	The researcher instructed the students in the following cognitive strategies: imagery, transfer, recombination, and reciprocal teaching. Students were taught to use visualization techniques to help them remember vocabulary words (imagery), make connections with their native language (transfer), and use known words in a sentence (recombination). It was found that students were able to use recombination and imaging effectively, but strategies of cognitive transfer and reciprocal teaching were more difficult.
Cardelle-Elawar, M., & Náñez, J. E., Sr. (1992). A metacognitive approach to teaching bilingual students. In R. V. Padilla & A. H. Benavides (Eds.), *Critical perspectives on bilingual education research* (pp. 221–241). Tempe, AZ: Bilingual Press/Editorial Bilingue.	To assess whether using a metacognitive approach to teaching mathematics produced a positive effect on students' achievement and attitude towards mathematics.	Study 1—90 sixth-grade bilingual Hispanic students from a suburban Arizona school with a majority Hispanic population; Study 2—30 sixth-grade students and 32 students from a comparable school.	Two true experiments.	Two classes were randomly assigned to the experimental condition.	Mathematics.	Mainstreamed mathematics classrooms.	The results indicated that the metacognitive techniques and problem-solving model produced a significant increase in bilingual Hispanic elementary-school students' mathematical achievement and attitude towards mathematics.
Chamot, A. U., Dale, M., O'Malley, J. M., & Spanos, G. A. (1992). Learning and problem solving strategies of ESL students. *Bilingual Research Journal, 16*(3/4), 1–34.	To investigate the effects of cognitive instruction in mathematics on the approach to problem solving of ESL students.	Thirty-two low or intermediate English proficiency students in elementary, middle, and high school ESL mathematics classrooms located in a small urban school district.	Causal/comparative (i.e., quasi-experimental); high implementation of CALLA program vs. low implementation of the program.	Think-aloud interviews with students who were solving a mathematics word problem.	Mathematics.	ESL classrooms.	Students in the high implementation classrooms were able to (a) solve the problem correctly, (b) use the correct sequence of problem-solving steps, and (c) use metacognitive strategies significantly more than students in the low-implementation classrooms.

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Table 1

Continued

Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Chávez, R. C. (1990). The development of story writing within an IBM Writing to Read program lab among language minority students: Preliminary findings of a naturalistic study. *Computers in the Schools, 7*(1/2), 121–144.	To determine the story/developmental writing changes within a "Writing to Read" program by limited English proficiency (LEP) students.	LEP students from 2 first and 2 second grade bilingual classrooms from a large semi-rural primary school district.	Ethnography.	Naturalistic observation techniques, including written journals by teachers and student writing products.	Writing.	ESL/ bilingual classroom.	The program was beneficial, and influential factors appeared to be the (a) opportunity for students to create, experiment, and choose in what language to express ideas; (b) validation of the experiences by peers, teachers, and staff; (c) opportunity to interact while writing; and (d) creation of an effective social learning climate.
Clark, S. T. (1999). Factors promoting literacy development of first-grade English language learners in monolingual-English classes at one elementary school (Doctoral dissertation, The Claremont Graduate University, 1999) *Dissertation Abstracts International 60*(6), 1870	To investigate the language learning of native Spanish-speaking students in post-Proposition 227 first grades	Learners (ELLs) in six monolingual-English first grades at one California school.	Observations, interviews.	40 visits to the research site over a 6-month period and included 90 hours of observations, teacher questionnaires, 15 hours of semi-structured interviews, and examination of classroom and school documents.	All content areas.	English Language Development (ELD).	Effective instruction for these relied on four themes: (a) a coherent schoolwide educational philosophy which supported the overall program design of the first grade, (b) a consistent literacy pedagogy that informed all aspects of the literacy program, (c) exceptional teacher participation in a variety of professional-development experiences, and (d) the commitment of resources in ways which maximized the efforts of onsite professionals.
Darder, A., & Upshur, C. C. (1993). What do Latino children need to succeed in school? A study of four Boston public schools. In R. Rivera & S. Nieto (Eds.), *The education of Latino students in Massachusetts: Issues, research, and policy implication. Boston* (pp. 127–146). Boston: University of Massachusetts, Boston, The Mauricio Gaston Institute for Latino Community Development and Public Policy.	To identify the significant themes and issues associated with school achievement for Latino children in four Boston elementary schools.	Four elementary schools with large Latino student enrollments with a focus on fifth-grade principals, teachers, parents, and students.	Case study.	Case study methods, including observations, interviews, and surveys.	Mixed.	Bilingual and mainstreamed classrooms.	The curriculum did not reflect a significant inclusion of Latino cultural values, history, or current realities of the community. Teachers had a range of expectations of Latino students, and those expectations reinforced the school culture. Successful instructional strategies included cooperative learning, activity-based learning, group work, integration of Spanish language use across classrooms, and opportunities for integration of bilingual and monolingual classrooms.

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Table 1

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Dixon, J. K. (1995). Limited English proficiency and spatial visualization in middle school students' construction of the concepts of reflection and rotation. *Bilingual Research Journal, 19*(2), 221–247.	To examine the effects of an environment where English proficient and LEP students can work together to construct the concepts of reflection and rotation.	Nine classes of eighth-grade students divided into treatment and control groups.	Quasi-experimental.	Three covariates and four posttests that measured rotation/reflection and students' visualization.	Mathematics.	Mainstreamed class.	After controlling for initial differences, it was concluded that students experiencing the dynamic instructional environment significantly outperformed students experiencing a traditional instructional environment on content measures of the concepts of reflection and rotation as well as on measures of two-dimensional visualization ability.
Echeverriarza, M. P. (1991). An analysis of the nature and roles of teacher and peer talk in a bilingual classroom. *Journal of Educational Issues of Language Minority Students, 8*, 71–89.	To examine the nature and roles of two types of classroom talk that emerged from a bilingual multiethnic classroom.	A combined fourth–fifth grade bilingual (English–Spanish) class.	Microethnography.	Ethnographic observations, direct observations, tape recording, informal interviews	Mixed—3 days; Fifth-grade math—7 days	Bilingual classroom.	This was a teacher-centered class, and the teacher had low expectations for the students, which resulted in a curriculum with nondemanding tasks. Official talk was controlled by the teacher in its language, messages, and content. Teacher's talk rarely acknowledged the students' work. Positive evaluations of correct answers were rarely given, and the teacher-led lesson was nondemanding and slowly paced.
Garcia, E. E. (1990). Instructional discourse in "effective" Hispanic classrooms. In R. Jacobson & C. Faltis (Eds.), *Language distribution issues in bilingual schooling* (pp. 104–117). Clevedon, England: Multilingual Matters.	To identify instructional styles of "effective" teachers of Hispanic students and examine how they differ from other teachers	Kindergarten, third-, and fifth-grade "excellent" classrooms from 12 metropolitan Phoenix school districts.	Observation.	Teacher–student classroom interactions were audio–video recorded for purposes of discourse analysis.	Literacy instruction.	Kindergarten, primarily Spanish; third grade, both languages; fifth grade, English only.	Teachers elicited student responses at relatively lower order cognitive and linguistic levels, but once a lesson elicitation occurred, students were allowed to take control of the specific lesson type.

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Table 1

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
García, E. E. (1993). Curriculum and instruction: Revision for constant relevancy. *Education and Urban Society, 25,* 270–284.	To examine the effects of an instructional intervention for Hispanic ELLs that is based on conceptual principles and empirical findings from research on effective teaching.	Eight teachers and 54 seventh-grade students from a middle school; a comparison group consisted of 48 students from the regular middle-school program.	Quasi-experimental.	Survey data, participant classroom observation, and standardized achievement data.	All subjects.	Bilingual and mainstreamed classrooms.	Students in the intervention consistently performed higher on the achievement outcomes than the comparison students. Students were not challenged by their schoolwork and exhibited little enthusiasm or genuine engagement in their classes.
García, G. E. (1991). Factors influencing the English reading test performance of Spanish-speaking Hispanic children. *Reading Research Quarterly, 26*(4), 371–392	To identify factors that influence English reading test performance in second language students.	Fifty-one bilingual (Spanish) and 53 monolingual fifth- and sixth-grade students.	Interviews.	Interviews.	Reading.	English-only classroom.	Spanish speaking students' reading test scores "seriously underestimated their reading comprehension potential." Tests results and qualitative evidence were negatively affected by limited prior knowledge, poor performance on questions requiring use of background knowledge, lack of understanding of vocabulary, and literal interpretation of the test. Since students used Spanish to interpret vocabulary and understand English reading passages, Spanish literacy should be considered in improving English reading comprehension.
Gersten, R. (1996). Literacy instruction for language-minority students: The transition years. *The Elementary School Journal, 96,* 227–244.	To examine the quality and quantity of instruction offered to second-language students; to identify productive instructional interactions	Twenty-four classrooms from three low-income schools in a large district in Southern California that had large language-minority populations	Longitudinal, qualitative, and observational study.	Qualitative classroom observation methods, interviews with teachers, administrators, and others.	Reading, language-arts instruction in grades 3 –6.	Year 1—primarily Spanish language or Sheltered-English programs; Year 2—primarily transition programs.	Effective instructional practices included checking students' comprehension of new vocabulary, providing opportunities for the use of new vocabulary, and requiring elaborated responses so that students could express their ideas.

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Giacchino-Baker, R. (1992). Recent Mexican immigrant students' opinions of their use and acquisition of English as a second language in an "English-Only" American high school. A qualitative study (Doctoral dissertation, The Claremont Graduate University, 1992). *Dissertation Abstracts International, 153*(3), 744.	To determine under what conditions Mexican immigrant students think they use and acquire English as a second language in an "English-Only" high school.	Fourteen recently arrived high-school-age Mexican immigrants.	Case study, ethnography.	Observation and interviews.	Students were "shadowed" throughout the school day.	Eleven students from different levels of ESL classes (beginning, intermediate, and advanced).	Three themes related to classroom instruction were addressed in the results: (a) what students say about their current use of English, (b) educational and institutional factors that affect students' use of English, and (c) students' suggestions for improvement.
Goatley, V. J., Brock, C. H., & Raphael, T. E. (1995). Diverse learners participating in regular education "book clubs." *Reading Research Quarterly, 30*, 352–380.	To study how student-led discussion groups provide literacy learning opportunities for diverse student participation, including ELLs.	A classroom of fifth graders, urban school location.	Ethnography.	Interviews, observation.	Reading, language arts.	Mainstreamed class.	ELL students who were normally placed in a pullout program were invited to participate in "book club" conversations within a "regular" classroom. ELLs found ways to participate and lead discussions while gaining a greater command of English.
Godina, H. (1998). Mexican-American high-school students and the role of literacy across home–school–community settings (Doctoral dissertation, University of Illinois, 1998). *Dissertation Abstracts International, 59*(8), 2825.	To study the interaction of home and school on literacy growth.	Fifteen secondary-level ELLs.	Ethnography.	Interviews, observation.	Across academic subjects.	ELL and content class.	Literacy practices differed at home and school, creating challenges not faced by native English speakers. The school failed to use student home literacy events in instructional setting.
González-Edfelt, N. (1990). Oral interaction and collaboration at the computer: Learning English as a second language with the help of your peers. *Computers in the Schools, 7*(1–2), 53–90.	To assess the effects of language proficiency of peer and role of computer in advancing English.	Sixteen male fifth-grade Latino students.	Experimental, multigroup, and qualitative.	Videotape analysis.	Working on The Oregon Trail computer simulation software.	Various programs.	Speakers with no, limited or full (bilingual English/Spanish and monolingual English) English proficiency were paired with one another in every combination possible. Speakers with no proficiency asked almost no questions when working with monolingual English speakers. Most interactions occurred when speakers with no proficiency were working the full-proficiency bilingual speakers. Cooperative learning seemed related to growth in English among all ELLs.

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Gutierrez, K. D. (1992). A comparison of instructional contexts in writing process classrooms with Latino children. *Education and Urban Society, 24*, 244–262.	To investigate the effects of writing process instruction by observing instructional strategies and classroom and physical arrangements.	Five classrooms with Latino students in a large elementary school in Los Angeles.	Two-year observational study.	Sociocontextual analysis, videotapes of classroom instruction, Teacher and student interviews, field notes, students' written products.	Language arts, writing.	Primarily Spanish used in two classrooms; Primarily English used in three classrooms.	Particular instructional scripts such as responsive/collaborative instruction provided richer contexts for language minority students to learn a variety of skills and to develop a larger repertoire of ways to participate in learning activities.
Henze, R. C., & Lucas, T. (1993). Shaping instruction to promote the success of language minority students: An analysis of four high school classes. *Peabody Journal of Education, 69*, 54–81.	To examine how "successful" teachers of language-minority students accomplish their objectives.	Four high school classrooms that served predominantly high percentages of language-minority students.	Case study.	Case study methods.	Mixed.	Mixed.	Five key objectives that identified effective teaching were addressed: (a) high expectations of students, (b) promoting language development, (c) developing content knowledge, (d) encouraging active student involvement and engagement, and (e) developing self-esteem among students.
Hruska, B. L. (2000, March). Bilingualism, gender, and friendship: Constructing second-language learners in an English-dominant kindergarten. Paper presented at the annual meeting of the American Association for Applied Linguistics, Vancouver, Canada.	To provide ethnographic data on the ways in which young language learners construct meaning while learning.	Six Spanish-dominant English language learners.	Ethnography.	Observations.	English kindergarten.	ESL and Spanish Transitional Bilingual Education (TBE) pullout programs.	Drew on data collected during a yearlong ethnographic study and demonstrated how the meanings of three local discourses and their inherent power dynamics shaped students' identities, classroom participation, access to relationships, access to knowledge, and ultimately their investment in school.
Huang, S. C., & Chang, S. F. (1998). Self-efficacy in learners of English as a second language: Four examples. *Journal of Intensive English Studies, 12*, 23–40.	To study ELL self-efficacy.	Four secondary-school students.	Case studies.	Interview.	ESL class.	ESL.	Adopted a qualitative research method to understand participants' self-efficacy phenomena in their ESL learning. Also used quantitative research to examine their self-efficacy and their relationship with participants' achievements.

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Jiménez, R. T., & Gámez, A. (1996). Literature-based cognitive strategy instruction for middle school Latina/o students. *Journal of Adolescent and Adult Literacy*, 40(2), 84–91.	To examine if an emphasis on comprehension, the use of culturally relevant texts, and instruction in and practice of reading fluency has strong potential for promoting and fostering the reading abilities of Latina/o students performing at low levels of literacy in middle school	Three low-achieving Latina/o students from a self-contained, seventh-grade classroom at a middle school in a large Midwestern urban school district.	Case study.	Classroom observation and student interviews.	Language arts.	English and Spanish	Students appeared to reflect added confidence in their ability to read. Students increased their metacognitive knowledge about (a) themselves as readers and (b) useful strategies for increasing comprehension of text.
Joyce, D. C. (1997). *Strategies for responding to the writing of ESL students*. San Diego, CA: San Diego State University. (ERIC Document Reproduction Service No. ED421014)	To explore the value of various editing strategies in improving writing skills.	Twenty-four ELL seventh graders.	Survey.	Examined writing skills pre- and post-training.	Middle-school ELD/English.	ELD class.	Great gains with peer editing, greater with teacher–student editing strategies.
Kaplan, R. G., & Patino, R. A. (1996, April). Teaching mathematical problem solving to students with limited English proficiency. Paper presented at the annual conference of the American Educational Research Association, New York, NY.	To test effectiveness of instructional strategies used to help ELLs learn to solve word problems.	Thirty bilingual sixth-grade students.	Ethnography.	Observations, videotape analysis, interviews.	Mathematics.	Bilingual sixth grade. Language of instruction was English.	Experimental strategy (a) provided a linguistic warm-up to the problem, (b) broke down the problem into natural grammatical phrases (meaning graphic representations, gestures, physical enactments, rephrasing the problem), (c) students worked problems in pairs, (d) students presented their solutions to the group, and (e) students created their own math problems with similar structures.

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
McConnell, V. H. (1996). Along the way toward English proficiency with content teachers, tutors, and LEP students: A qualitative study of language and learning at the secondary level (Doctoral dissertation University of New Mexico, 1996). *Dissertation Abstracts International, 57*(4), 1452.	To study secondary-level ELL students and their experiences in a social-studies class.	ELLs in three social-studies classrooms, their teacher, and a bilingual aide.	Case study.	Interviews, observations.	A large high school, social studies.	Content ESL program.	Discovered that the cooperative arrangements developed by the bilingual aide created small learning communities among the ELL students. In addition, the use of the native language in developing language use in social studies was not seen as detrimental.
Medina, S. (1990, March). The effects of music upon second language vocabulary acquisition. Paper presented at the annual meeting of the Teachers of English to Speakers of Other Languages, San Francisco, CA.	To study the effects of music upon vocabulary acquisition.	Forty-eight second graders, all ELL, Latino, low-income.	Survey, experiment.	Interview, vocabulary measurement.	Reading vocabulary.	ESL within a bilingual program.	Found that illustrations and music helped students recall English vocabulary words, especially among those students who had lower English proficiency.
Merino, B. J., Legarreta, D., Coughran, C. C., & Hoskins, J. (1990). Interaction at the computer by language minority boys and girls paired with fluent English proficient peers. *Computers in the Schools, 7*(1/2), 109–119.	To investigate interaction at the computer among limited and fluent English proficient boys and girls	Forty-one pairs of limited and English proficient predominantly Hispanic students in grades 3–6.	Observational Study.	Systematic classroom observation.	Science.	English and Spanish.	Pairing LEP and FEP students together regardless of gender can be an effective strategy for improving on-task behavior, equitable turn taking, and cooperative exchanges.
Pilgreen, J., & Krashen, S. (1993). Sustained silent reading with English as a second language high-school students: Impact on reading comprehension, reading frequency, and reading enjoyment. *School Library Media Quarterly, 22*(1), 21–23.	To study the effectiveness of a Sustained Silent Reading program for ELLs.	One hundred and twenty-five high-school ESL students.	One group design.	Pre- and post-interviews.	Reading.	ESL.	Found that 71% enjoyed the program and broadened the sources of books they read. Stanford diagnostic reading scores increased by an effect size of about .75.
Poglinco, S. M. (1997). *La meta, el desvio,* and *la superacion*: Student images of success and achievement. A qualitative study of Latina second language learners in high school (Doctoral dissertation, New York University, 1997). *Dissertation Abstracts International* [illegible]	To study how Latinas' goals for school meshed with the programs dealt them at school.	Seven high-school girls, ages 16–18, 11th grade.	Ethnography.	Interviews, observations.	Across subjects, students were all enrolled in a bilingual program.	Bilingual/ English.	Students wondered about the effectiveness of Spanish at this level, since the courses needed to graduate were all in English. Teachers used a method for developing Spanish literacy while developing English. Students were allowed to conduct translations for their work.

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Salvador, H., & Perez, O. R. J. (1995). Appraising curriculum and instruction practices in bilingual programs in elementary schools varying in effectiveness: A qualitative and quantitative comparison. *Journal of Educational Issues of Language Minority Students, 15.* Retrieved from www.ncbe.gwu.edu/miscpubs/jeilms/vol15/appraising.htm	To discover the differences in instructional practices between schools ranked as exemplary and those ranked lower.	One hundred and eight elementary teachers.	Case study.	Interviews, field observations.	All content areas in elementary school.	Bilingual.	Teachers in exemplary schools differed in reporting that they had sufficient materials in assisting their students in the transition from Spanish to English. Furthermore, they understood the district policy for transitioning from Spanish to English. Clear guidelines made a difference.
Tujay, S., Jennings, L., & Dixon, C. (1995). Classroom discourse and opportunities to learn: An ethnographic study of knowledge construction in a bilingual third grade class. *Discourse Processes, 19,* 75–110.	To understand the processes by which bilingual/monolingual speakers "coconstruct" meaning while pursuing a common task (writing about a trip into space). Based on the whole social construction of meaning.	Six 3rd graders, three bilingual, one monolingual Spanish, one monolingual English. One classroom.	Ethnography.	Interviews, observation.	Students were writing a story about visiting planets with aliens.	Two-way bilingual education.	Students were given time and space and flexibility to produce their stories. Student stories were dramatically improved as students shared work, involved many others, and saw the teacher as resource rather than arbiter of quality.
Varela, E.E. (1997). Speaking solo: Using learning strategy instruction to improve English language learners' oral presentation skills in content-based ESL (Doctoral dissertation, Georgetown University, 1993). *Dissertation Abstracts International, 58*(7), 2626.	To test the effectiveness of learning strategy instruction.	Forty-one students in Grades 6–8.	General qualitative strategy.	Interviews, other quantitative data.	ESL content classes, middle school.	ESL content classes.	Found that learning strategies are beneficial in providing students with language tools they will need to rely on in content classes taught in English. Use of learning strategies was associated with enhanced performance.
Villar, J. A. (1999). A model for developing academic language proficiency in English-language learners through instructional conversations (Doctoral dissertation Indiana University, 1999). *Dissertation Abstracts International, 60*(4), 987.	To study the effectiveness of instructional conversations.	Twenty 10th graders Latino ELLs.	Ethnography.	Interviews, observations.	Across content areas.	ELD secondary.	Found that instructional conversations enhanced students' abilities to connect current and past learning. An effective teaching tool for ELLs. Also, using a thematic focus for content instruction helps develop both content knowledge and English skills.

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Citation	Purpose	Participants	Research design	Methods	Context	Language program type	Results
Walker de Feliz, J., Johnson, R. T., & Schick, J. E. (1990). Socio- and psycholinguistic considerations in interactive video instruction for limited English proficient students, *Computers in the Schools, 7*(1/2), 1990.	To test the viability of interactive videodisc lessons for LEP students.	One fourth-grade ESL classroom of an inner-city school.	Observational study.	Observations.	Science.	ESL classroom.	The findings corroborated the advantages of interactive video technology for students who need contextually rich environments. The small group atmosphere allowed the children to share information, ask questions, and use humor. The mixed ability groups allowed for effective interaction.
Waxman, H. C., Walker de Felix, J., Martinéz, A., Knight, S. L., & Padrón, Y. N. (1994). Effects of implementing classroom instructional models on English language learners' cognitive a affective outcomes. *Bilingual Researc Journal, 18*(3/4), 1–22.	To examine the effectiveness of alternative instructional strategies/ programs for ELLs.	Seventeen bilingual teachers and 325 students from five elementary schools in a metropolitan school district in the south central region of the U.S.	Quasi-experimental.	Three experimental treatments that each consisted of 45 hours of training from university professors, reading and language-art achievement tests, student surveys.	Reading, language arts.	Bilingual classrooms.	Students in the Effective Use of Time (EUOT) treatment had significantly higher posttest scores on reading and language arts than students in the other groups. Generally, students in the EUOT group had more favorable attitudes about their classroom environment than students in the other groups.

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